It is claimed:

1. A multicellular honeycomb structure composed of a ceramic material comprising a non-oxide polycrystalline phase constituting 10-70% by weight, with the remainder of the ceramic material constituting a cordierite phase, the non-oxide polycrystalline phase being selected from the group consisting of carbides, nitrides, and borides, wherein the non-oxide polycrystalline phase has a particle aspect ratio of less than 3.

2. The honeycomb of claim 1 wherein the non-oxide polycrystalline phase is selected from the group consisting of polycrystalline silicon carbide and polycrystalline silicon nitride.

3. The honeycomb of claim 2 wherein the non-oxide polycrystalline phase constitutes 10-50% by weight of the ceramic material.

4. The honeycomb of claim 3 wherein the non-oxide polycrystalline phase constitutes 10-30% by weight of the ceramic material.

5. The honeycomb of claim 6 wherein the non-oxide polycrystalline phase is polycrystalline silicon carbide.

6. The honeycomb of claim 6 wherein the non-oxide phase is polycrystalline silicon nitride.

7. The honeycomb of claim 8 wherein the ceramic material has an open porosity of at least 30% and a median pore size of at least 5 micrometers.

8. The honeycomb of claim 7 wherein the porosity is between 40% and 60%.

9. The honeycomb of claim 8 wherein the median pore size is between 8 micrometers and 12 micrometers.

10. A filter for trapping and combusting diesel exhaust particulates comprising a wall-flow honeycomb body composed of a porous ceramic material and having a plurality of parallel end-plugged cell channels traversing the body from a frontal inlet end to an outlet end thereof, wherein the ceramic material comprises a non-oxide polycrystalline phase constituting 10-70% by weight, with the remainder of the ceramic material constituting a cordierite phase, the non-oxide polycrystalline phase being selected from the group consisting of carbides, nitrides, and borides, wherein the filter has an open porosity of at least 30% and a median pore size of at least 5 micrometers.

11. The filter of claim 10 wherein the porosity is between 40% and 60%.

12. The filter of claim 11 wherein the median pore size is between 8 micrometers and 12 micrometers.

13. The filter of claim 12 wherein the non-oxide polycrystalline phase is selected from the group consisting of polycrystalline silicon carbide and polycrystalline silicon nitride.

14. The filter of claim 13 wherein the non-oxide polycrystalline phase constitutes 10-50% by weight of the ceramic material.

15. The filter of claim 14 wherein the non-oxide polycrystalline phase constitutes 10-30% by weight of the ceramic material.

16. The filter of claim 15 wherein the non-oxide phase is polycrystalline silicon carbide.

17. The filter of claim 15 wherein the non-oxide phase is polycrystalline silicon nitride.

18. The honeycomb of claim 10 wherein the non-oxide phase has a particle aspect ratio of less than 3.

19. A filter according to claim 10 exhibiting a mean coefficient of thermal expansion of between 20-45 x 10^{-7}/°C.

20. A filter according to claim 19 exhibiting a four-point modulus of rupture as measured on a cellular bar of at least about 300 pounds per square inch (psi).

21. The filter of claim 20 wherein the four-point modulus of rupture is at least about 700 psi.

22. The filter of claim 21 wherein the modulus of rupture is at least about 1000 psi.

23. A diesel exhaust particulate filter comprising a plugged, wall-flow honeycomb filter body composed of porous ceramic material and comprising a plurality of parallel end-plugged cell channels traversing the body from a frontal inlet end to an outlet end thereof, wherein:

the honeycomb body is composed of a composite ceramic having a non-oxide polycrystalline phase selected from the group consisting of carbide, nitrides and borides, the non-oxide polycrystalline phase constituting 10-70% by weight of the ceramic, the remainder being an oxide phase selected from the group consisting of alkali aluminum silicates and alkaline earth aluminum silicates,

the diesel exhaust particulate filter being characterized by an open porosity of at least 30%, a median pore size of at least 5 micrometers, a mean coefficient of thermal expansion of between 20-45 x 10^{-7}/°C, and a modulus of rupture as measured on a cellular bar of at least about 300 pounds per square inch (psi).

24. The diesel exhaust particulate filter of claim 23 wherein the non-oxide polycrystalline phase is selected from the group consisting of polycrystalline silicon carbide and polycrystalline silicon nitride.

25. The diesel exhaust particulate filter of claim 24 wherein the non-oxide polycrystalline phase constitutes 10-50% by weight.

26. The diesel exhaust particulate filter of claim 25 wherein the non-oxide polycrystalline phase constitutes 10-30% by weight.

27. The diesel exhaust particulate filter of claim 23 wherein the oxide phase is alkali aluminum silicate selected from the group consisting of lithium aluminum silicate and potassium aluminum silicate.

28. The diesel exhaust particulate filter of claim 23 wherein the oxide phase is alkaline earth aluminum silicate selected from the group consisting of calcium aluminum silicate and barium aluminum silicate.

29. The diesel exhaust particulate filter of claim 24 wherein the porosity is between 40% and 60%.

30. The diesel exhaust particulate filter of claim 29 wherein the median pore size is between 8 micrometers and 12 micrometers.

31. The diesel exhaust particulate filter of claim 30 wherein the non-oxide polycrystalline phase is polycrystalline silicon carbide.

32. The diesel exhaust particulate filter of claim 30 wherein the non-oxide polycrystalline phase is polycrystalline silicon nitride.

33. The diesel exhaust particulate filter of claim 26 wherein the non-oxide polycrystalline phase has a particle aspect ratio of less than 3.

34. The diesel exhaust particulate filter of claim 24 wherein the four-point modulus of rupture is at least about 700 psi.

35. The diesel exhaust particulate filter of claim 34 wherein the modulus of rupture is at least about 1000 psi.